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| 10/537,501 | 06/03/2005 | Jorg Heuer | 112740-1080 | 3486 |
| 29177 K&L Gates LLP P.O. BOX 1135 CHICAGO, IL 60690 | 7590 04/28/2009 | | <div>EXAMINER</div> <div>TSUL, WILSON W</div> | |
| | | | <div>ART UNIT</div> <div>2178</div> | <div>PAPER NUMBER</div> |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,501

Applicant(s)

HEUER ET AL.

Examiner

WILSON TSUI

Art Unit

2178

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE-US)
Paper No(s)/Mail Date 20081216
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This non final action is in response to the RCE filed on: 02/11/09, and IDS filed on: 12/16/08.
2. Claims 17, 23, 29, and 30 are amended. Claims 1-16 are cancelled. Claims 17, 23, 29, and 30 are independent claims. Thus, claims 17-30 are pending.
3. Claims 17-30 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Wan, further view of Hunter.

Priority

4. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d) with respect to PCT/EP03/13511 filed on 01/12/2003, foreign priority based on application filed in Germany on 12/03/2002, and foreign priority based on application filed in Germany on 08/29/2003.

Information Disclosure Statement

5. The information disclosure statement (IDS) submitted on 12/16/08 is being considered by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 17, 23, 29, and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

More specifically, the amended claim language cites that the textual content is encoded as an element of a complex data type, however, the specification does not appear to show that the textual content is encoded as an element, and rather explains that the text can occur before, after or between elements, rather than being an element of a complex data type, as explained in paragraph 0026 and 0027 (page 8 of specification filed on 06/03/05). The examiner respectfully requests the applicant explain where in the specification is the amended limitation explained in the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 17-30 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Wan (US Application: US 2004/0028049 A1, published: Feb. 12, 2004, filed: Oct.

5, 2001), further view of Hunter ("An Overview of the MPEG-7 Description Definition Language (DDL)", published: June, 2001, pages 765-772).

With regards to claim 17, Wan teaches a method for encoding an XML-based document including contents according to an XML schema language definition (paragraph 0021), said method comprising the steps of:

- *Generating a coded binary representation of the document* (whereas, a binary representation of the document is implemented through encoding) *by assigning binary structure codes to the contents of the document via code tables* (paragraphs 0011, 0017, 0044: whereas, a structure stream is encoded with code tables.)
- Wherein the coding comprises encoding special data types of the document (paragraphs 0055-0058: whereas, when implementing the coded binary representation, special datatypes can be flexibly identified), and *a parent node has a binary structure code, and in a first hierarchical plane below said parent node a plurality of element nodes having binary structure codes* (Fig 6A, paragraph 0104).

However, Wan does not expressly teach *wherein* the datatype is *an element of a complex data type with a mixed content model, and wherein within said complex data type in the first hierarchical plane, textual content is an element*.

Hunter teaches *wherein* the datatype is *an element of a complex data type with a mixed content model*, comprises a parent node and in a first hierarchical plane below said

parent node a plurality of element nodes, *and wherein within said complex data type in the first hierarchical plane, textual content is an element.* (pages 767, 768, S768: whereas, datatypes include complex type data with a mixed content model. The parent node such as 'OrganizationType' is at a first node/top-most node/element (top hierarchical plane) in a hierarchical XML tree, the element nodes (such as OrgName, or ContactPerson) are nested below the 'OrganizationType'. Also as explained in 768, the complexType includes *mixed* content, and the mixed content character data appears between elements and their children, as shown in the valid instance example of a mixed content model, the 'Dear Ms.' String is textual content as an element.).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Wan's binary encoding of datatypes (and special datatypes) within a hierarchical structure; to have further included the complex datatype, as one of the special datatypes for describing an MPEG stream, as taught by Hunter. The combination of Wan and Hunter would have allowed Wan to have "allowed children elements in their (complex types) content and carry attributes" (page 767, S767: Hunter) to help define internal schema components which can be used in other schema components (Hunter: page 767).

With regards to claim 18, which depends on claim 17, Wan and Hunter teach *wherein the assignment of the structure codes to the textual contents of a complex type data type with mixed content model*, as similarly explained in the rejection for claim 17, and is rejected under similar rationale. Furthermore, Wan teaches the assignment of

structure codes *is effected exclusively via OperandTBC coding tables* (page 13: whereas, an ID code table is used to store hierarchical/tree data for a set of nodes).

With regards to claim 19, which depends on claim 17, Wan and Hunter teach *wherein the textual contents of a complex type data type with the mixed content model*, as similarly explained in the rejection for claim 17, and is rejected under the same rationale. Additionally, Wan teaches the textual contents are further *assigned position codes* (paragraph 0109: whereas node locators are used for assigning position codes).

With regards to claim 20, which depends on claim 19, Wan teaches *wherein single element position codes and/or multiple element position codes are used in the assignment of the position codes* (paragraph 0102, 0109: whereas, one or more node locators are used for assigning position codes).

With regards to claim 21, which depends on claim 19, Wan teaches *wherein the position codes are encoded using codes of variable length* (paragraph 0104: whereas each node/node-locator includes a variable size field).

With regards to claim 22, which depends on claim 21, Wan teaches *wherein the position codes are encoded using a code vluimsbf5* (page 11: whereas, as declared in the 'size_in_byte' field of a bit stream, a variable length unsigned integer, and most significant bit(s)-first, format is used as part of the encoding process).

With regards to claim 23, Wan teaches *a method for decoding a binary representation of an XML-based document* (paragraph 0075), comprising: *Receiving a coded binary representation of the document by assigning binary structure codes to the contents of the document via code tables:* (paragraphs 0011, 0017, 0044: whereas, a structure stream is encoded and then decoded with code tables); *Assigning structure codes to textual content of the element datatype* (paragraphs 0049, 0050, 0054: whereas structure codes are assigned to data types. Additionally, structure codes are assigned to textual content as shown in Fig. 7). *Converting the assigned structure codes into the textual contents* of the XML-based document that were assigned to the structure codes (paragraph 0075: whereas, a decoder implements the conversion process).

Encoding the textual contents of special data types of the document (paragraphs 0055-0058: whereas, when implementing the coded binary representation, special datatypes can be flexibly identified), and *a parent node has a binary structure code, and in a first hierarchical plane below said parent node a plurality of element nodes having binary structure codes* (Fig 6A, paragraph 0104).

However, Wan does not expressly teach *wherein* the datatype is *an element of a complex data type with a mixed content model, and wherein within said complex data type in the first hierarchical plane, the textual content is an element*. Hunter teaches *wherein* the datatype is *an element of a complex data type with a mixed content model,*

comprises a parent node and in a first hierarchical plane below said parent node a plurality of element nodes, *and wherein within said complex data type in the first hierarchical plane, the textual content is as an element* (page 768, S768: whereas, datatypes include complex type data with a mixed content model. The parent node such as 'OrganizationType' is at a first node/top-most node/element (top hierarchical plane) in a hierarchical XML tree, the element nodes (such as OrgName, or ContactPerson) are nested below the 'OrganizationType'. Also as explained in 768, the complexType includes *mixed* content, and the mixed content character data appears between elements and their children, as shown in the valid instance example of a mixed content model, the 'Dear Ms.' String is textual content as an element.).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Wan's binary encoding of datatypes (and special datatypes) within a hierarchical structure; to have further included the complex datatype as one of the special datatypes for describing an MPEG stream, as taught by Hunter. The combination of Wan and Hunter would have allowed Wan to have "allowed children elements in their (complex types) content and may carry attributes" (page 767, S767: Hunter) to help define internal schema components which can be used in other schema components (Hunter: page 767)..

With regards to claim 24, which depends on claim 23, Wan teaches *wherein the assignment is effected by means of structure codes (SBC) via OperandTBC coding tables* (page 13: whereas, an ID code table is used to store hierarchical/tree data for a

set of nodes), and also paragraph 0075, whereas a complementary decoder process is implemented.

With regards to claim 25, which depends on claim 23, Wan and Hunter teaches *wherein binary representations of textual contents of a "complex type" data type with the "mixed" content model*, as similarly explained in the rejection for claim 23, and is rejected under similar rationale. Additionally Wan teaches *addressed by means of "position codes" are further converted into textual contents at the assigned position* (paragraphs 0109-0112: whereas, reconstruction/decoding takes place by converting into textual contents at the assigned position).

With regards to claim 26, which depends on claim 25, Wan teaches wherein *the "position codes" comprise "single element position codes" (SPC) and/or "multiple element position codes" (MPC)* (paragraphs 0102, 0109 : whereas, one or more node locators are used for position codes).

With regards to claim 27, which depends on claim 25, Wan teaches wherein the *"position codes" are encoded using codes of variable length* (paragraph 0104: whereas each node/node-locator includes a variable size field)

With regards to claim 28, which depends on claim 27, Wan teaches *wherein the "position codes" are encoded using a code vluimsbf5* (page 11: whereas, as declared in

the 'size_in_byte' field of a bit stream, a variable length unsigned integer, and most significant bit(s)-first, format is used as part of the encoding process).

With regards to claim 29, for a device performing a method similar to the method of claim 17, is rejected under similar rationale.

With regards to claim 30, for a device performing a method similar to the method of claim 23, is rejected under similar rationale.

Response to Arguments

8. Applicant's arguments filed 02/11/09 have been fully considered but they are not persuasive.

9. The applicant first argues with respect to the independent claims, that "contrary to the prior art and as discussed in Hunter and Wan, the elements do not contain any text [and] rather text is encoded separately as a text stream wherein the data structure points to specific text elements of that text stream (Fig 1 of Wan)". However, this argument is not persuasive since the elements such as 'TD' contains text such as 'Basketball', 'soccer', or 'documentary' in Figure 1. It appears the applicant is arguing that Wan's encoded datatypes do not include text that appears between elements and their children (mixed content). However, the examiner respectfully directs attention to Hunter, which teaches mixed content within a complex datatype, such that text/character data elements are acceptable when they appear between elements and their children, as shown in the example of a valid instance in page 768: whereas, 'Dear

Ms.' is text that is contained within the 'Introduction' element. Thus, the combination of Wan, which teaches encoding of a document, with flexible data type encoding (special data types), with the special complex datatype and mixed content support that is taught by Hunter, teaches the required claim limitations, as further explained in the rejections above.

10. The applicant further points out that Fig. 7 of Wan shows a way to circumvent the limitations of text packet sizes, and that contrary to the examiner's interpretation, the flags 704 used in the text packet have nothing to do with a structure code of a complex type [and therefore] Wan does not disclose to assign a structure code to a textual content within any type.

However, the examiner respectfully disagrees, since as shown in Figure 1 of Wan, the text nodes are part of a documents structure, and the text nodes are hierarchically contained (subordinate nodes) to one or more element nodes. The examiner directs attention to Wan (paragraphs 0055-0058: whereas, when implementing the coded binary representation, special datatypes are acceptable for encoding, and can be flexibly identified), and Hunter, as explained in the rejection above, teaches special datatypes, include complex datatypes, the complex datatypes can contain mixed content, to support text content below a parent node (page 768 of Hunter).

11. The applicant argues that the dependent claims are allowable, since they depend upon allowable independent claims. However, this argument is not persuasive since the independent claims have been shown/explained to be rejected.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILSON TSUI whose telephone number is (571)272-7596. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CESAR B PAULA/
Primary Examiner, Art Unit 2178

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/Wilson Tsui/

Patent Examiner

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April 17, 2009